

ICELL8® cx 3' DE Chip

Catalog No.

640199

(Also sold as part of 640188, 640189)

Amount

1 chip

Lot Number

Specified on product label.

Description

The ICELL8 cx 3' DE Chip is a component of the ICELL8 cx Single-Cell System and is used with application-specific SMARTer® NGS kits designed for single-cell isolation and analysis. The ICELL8 cx 3' DE Chip is a 250-nl flat-bottom chip with 5,184 nanowells, each of which contain a pre-printed oligo(dT) primer with a nanowell-specific barcode to perform the 3' DE application. Sequencing data generated from samples processed with the ICELL8 cx 3' DE Chip are ultimately traced back to individual nanowells on the chip using the nanowell-specific barcodes included in the preprinted oligo(dT) primers.

Package Contents

- 1 x ICELL8 cx 3' DE Chip

Storage Conditions

- Store at room temperature

Expiration Date

- Specified on product label

Shipping Conditions

- Room temperature

Product Documents

Documents for our products are available for download at takarabio.com/manuals

The following documents apply to this product:

- ICELL8 cx 3' DE User Manual
- ICELL8 cx CellSelect® Software User Manual

Quality Control Data

Three chips from each lot were tested as follows:

One chip was tested to ensure appropriate imaging quality performance: Fiducial mix and cells stained with Hoechst dye were dispensed into a subset of chip nanowells for the purposes of aligning the chip and adjusting the focus of the imaging system to the bottom of each well. The remaining wells were dispensed with 1X PBS and imaged in the DAPI channel using the ICELL8 cx instrument. Images of wells filled with 1X PBS were analyzed using CellSelect Software, and the number of wells for which the software detected a positive signal indicating the presence of a cell was counted and compared to the total number of wells assayed. The percentage of wells yielding images with a positive signal in the DAPI channel was confirmed to be <5%.

Takara Bio USA, Inc.

1290 Terra Bella Avenue, Mountain View, CA 94043, USA

U.S. Technical Support: techUS@takarabio.comUnited States/Canada
800.662.2566
(102319)Asia Pacific
+1.650.919.7300Europe
+33.(0)1.3904.6880Japan
+81.(0)77.565.6999

A second chip was tested to ensure that it yields an appropriate number of reads per barcode: 12 pg of Control K-562 Total RNA in 1X PBS was dispensed into each of the 5,184 chip wells, and a cDNA library was prepared as described in the ICCELL8 Chip and Reagent 3' DE Kit User Manual. The resulting library was analyzed using a High Sensitivity DNA Kit (Agilent, Cat. No. 5067-4626) on an Agilent Bioanalyzer. Qualitative assessment of the library size range indicated that it was approximately 300–1,900 bp. The library concentration was confirmed via qPCR to be greater than 4 nM. The library was denatured and diluted to 10 pM with 2% PhiX and sequenced on a MiSeq® sequencer using the 150-cycle (Read 1 = 25 cycles, Read 2 = 125 cycles) MiSeq Reagent Kit v3 (Illumina, Cat. No. MS-102-3001). Total reads per library were confirmed to be $>1.7 \times 10^7$ with >170 normalized reads per barcode, indicating a sufficient median diversity per barcode. $>99\%$ of barcodes were confirmed to be functional, with <50 barcodes yielding <30 normalized reads.

A third chip was tested to ensure that barcode locations are as expected: 12 pg of Control K-562 Total RNA in 1X PBS was dispensed into specific wells of the chip. These wells are unique and should yield reads with expected or known barcodes only. A cDNA library prepared as described in the ICCELL8 Chip and Reagent 3' DE Kit User Manual. The resulting library was analyzed using a High Sensitivity DNA Kit (Agilent, Cat. No. 5067-4626) on an Agilent Bioanalyzer. Qualitative assessment of the library size range indicated that it was approximately 300–1,900 bp. The library concentration was confirmed via qPCR to be greater than 4 nM. The library was denatured and diluted to 10 pM with 2% PhiX and sequenced on a MiSeq sequencer using the 150-cycle (Read 1 = 25 cycles, Index = 8 cycles, Read 2 = 125 cycles) MiSeq Reagent Kit v3 (Illumina, Cat. No. MS-102-3001). Total reads per library were confirmed to be $>5 \times 10^6$, which was sufficient to determine that expected barcodes comprise the majority ($>70\%$) of sequencing reads.

It is certified that this product meets the above specifications, as reviewed and approved by the Quality Department.

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NOTICE TO PURCHASER:

Our products are to be used for **Research Use Only**. They may not be used for any other purpose, including, but not limited to, use in humans, therapeutic or diagnostic use, or commercial use of any kind. Our products may not be transferred to third parties, resold, modified for resale, or used to manufacture commercial products or to provide a service to third parties without our prior written approval.

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U.S. Technical Support: techUS@takarabio.com

United States/Canada

800.662.2566

Asia Pacific

+1.650.919.7300

Europe

+33.(0)1.3904.6880

Japan

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